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Citation for published version:

Spiegel, S 2012, *Formalisation Policies, Informal Resource Sectors and the De-/Re-Centralisation of Power: Geographies of Inequality in Africa and Asia*. Centre for International Forestry Research, Bogor, Indonesia. <<http://www.cifor.org/fileadmin/subsites/proformal/PDF/RSpiegel1212.pdf>>

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Publisher's PDF, also known as Version of record

Publisher Rights Statement:

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REPORT

Formalisation policies, informal resource sectors and the de-/re-centralisation of power

Geographies of inequality in Africa and Asia

Samuel J. Spiegel

Center for International Forestry Research
December 2012



Report

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Geographies of inequality in Africa and Asia

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University of Edinburgh, United Kingdom

Reports

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Spiegel, S.J. 2012 Formalisation policies, informal resource sectors and the de-/re-centralisation of power: Geographies of inequality in Africa and Asia. Report. CIFOR, Bogor, Indonesia.

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This document has been produced with the financial assistance from the European Union through the EU-funded project PRO-FORMAL (Grant # EuropeAid/ENV/2010-242904/TPS). More information is available at <http://www.cifor.org/pro-formal>. The views expressed herein are those of the authors and can in no way be taken to reflect the official opinion of the European Union or CIFOR.

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Summary

In recent years, a burgeoning body of research in Asia and Africa has documented how policies to formalise rural economies have often failed to empower poorer small-scale producers due to socio-economic, institutional and political factors. Research on the link between formalisation frameworks and livelihood insecurity is increasingly recognised as a priority. This study examines how national formalisation policies can contribute to livelihood insecurity, focusing on the implications of centralising, decentralising and recentralising power in regulatory processes. Developing an approach for examining 'scalar' features of formalisation debates that cut across a variety of rural sectors, from land regulation to forestry regulation, the analysis draws upon a critical review of policy documents as well as field observations and interviews and gives particular attention to cases in Zimbabwe and Indonesia in small-scale mining sectors. In these cases, efforts to decentralise decision-making power were short lived, ultimately replaced by national efforts to recentralise power between 2005 and 2012.

The analysis illustrates how the supposed 'benefits' of formalisation policies have been highly elusive in low-income rural communities, partly because small-scale producers have been ostracised during regulatory reform processes and implementation decision-making. The analysis considers how formalisation policies have been used to justify heavy-handed law enforcement campaigns, contextualising how private property enforcement and national environmental law became contentious rationales for police crackdowns in recent years, leading to intensified livelihood insecurities and a host of negative social, environmental and economic outcomes. The conclusions suggest the need to carefully consider: (1) How access to the benefits of formalisation policy may become more unequal in rural contexts when global and national policy strategies have a narrow focus on building up the power of central states at the expense of alternative (more 'local') governance scales; (2) How frictions between large-scale and small-scale production models may be addressed by revising formalisation policy priorities; and (3) How research on the heterogeneous dynamics of marginalisation within and across sectors could help steer national policy narratives away from top-down policy perspectives and towards perspectives that take better account of diverse livelihood arrangements and constraints in contested rural areas.

1. Introduction

International development analysts have frequently argued that a lack of adequate regulation in low-income countries is enabling illegal economic activities to flourish and perpetuating inefficient resource use, thereby stifling economic growth and development (De Soto, 2000; Wenar, 2008). Attempts to promote law and order in Africa and Asia have figured prominently in the priorities of researchers in the World Bank and other global agencies, and policymakers have widely praised academic work that advocates for the enforcement of property rights as a way of stimulating greater economic opportunities and bringing ‘win-win’ benefits to society as a whole. This ‘win-win’ vision of development and this particular relation between academia and policymakers is illustrated, for example, in the words of former British Prime Minister Margaret Thatcher, who, while praising Hernando De Soto’s book *Mystery of Capital*, declared that ‘the single greatest source of failure in the Third World is the lack of a rule of law that upholds private property and provides a framework for enterprise.’¹ De Soto’s book argued that ‘capitalism succeeds in the West’ and that poorer countries were failing to mirror the successes of industrialised countries because of the failure to delineate, promote and enforce private property rights (De Soto, 2000, p. 1).

Neither De Soto’s nor Thatcher’s advocacies were confined to one economic sector. Their arguments were that the enforcement of private property rights is needed across sectors, maintaining that central governments in poorer countries, by implementing market-friendly rules, should use private property as the mechanism for unlocking the power of modern development. These narratives resonate with wider trends in ‘formalisation’ scholarship in recent years, addressing the land, forestry and mining sectors, which have suggested that informal economic sectors must be ‘formalised’ through processes that differentiate between legitimate and illegitimate activity and bring the former into the officially regulated sector.² In critical research circles, however, the dominant narrative of formalisation as a development solution has met with criticism for multiple reasons. Musembi (2007) critiques De Soto’s depoliticised formalisation discourse in the context of land management and contends that poorer populations can be marginalised by the various institutional processes through which formal rights claims are negotiated. Her analysis in Kenya stresses that there is an ‘unproven link’ between formalisation’s theorised benefits and reality, warning that mainstream narratives succumb to an ‘underlying social evolutionist bias which presumes that individual ownership is ultimately inevitable for all social contexts’ (p. 1457). Various studies suggest that formalisation policy prescriptions can be misguided because national formalisation policies can lead to a diverse mix of negative and positive outcomes for different groups (Cousins, 2009; Kaarhus *et al.*, 2005; Sjaastad and Cousins, 2008). Benjaminsen *et al.* (2006) suggest that much of the scholarship on formalisation overlooks ‘risks inherent in the formalization process itself’ and the ‘problem of formalizing existing inequalities’ (p. 4). A growing body of sector-specific research documents how poorer populations of small-scale producers have been marginalised by the complex regional and global institutional processes through which formal rights claims are contested, highlighting how the socio-economic benefits of formalisation are unevenly distributed in society (Cousins, 2008; Maconachie and Hilson, 2011; Parsa *et al.*, 2011; Siegel and Veiga, 2009; Sjaastad and Cousins, 2008; Toulmin, 2008).

1 Quoting Thatcher in Dyal-Chand (2007, p. 60).

2 Benjaminsen *et al.* (2006) provide a wider critical review of various prominent formalisation discourses.

This study contributes to the debate on why national governments pursue formalisation policies and explores the consequences of formalisation policies for rural livelihoods, focusing on how livelihood insecurities in contested land areas can vary and change when governments undertake reforms to decentralise and recentralise power. Although it is common in global development discourse to blame rural stakeholders for ‘local’ development failures, a trend that Mohan and Stokke (2000) critically examine in depth,³ this study sets out to move beyond structural notions of local development failure and instead focus on how ‘decentralisation’ and ‘recentralisation’ processes in governance dynamics affect formalisation agendas in low-income contexts. Ribot (2003) cautions that ‘decentralisation’ reforms often involve a ‘failure to transfer discretionary powers’ (p. 62) and suggest that efforts at ‘decentralising’ resource governance have not effectively supported democratic governance and sustainable livelihood trajectories. Building on this concern, the analysis developed below examines the impacts on formalisation agendas when national schematic visions of law and order supplant local context-guided decision-making, considering the proposition that exclusion of small-scale producers from policy processes becomes especially significant when national states take steps to recentralise power in the wake of decentralisation efforts. While cases from across sectors are reviewed, particular attention is given to case studies in Zimbabwe and Indonesia where the impacts of formalisation agendas were politically contentious during the course of governance efforts to recentralise power between 2005 and 2012.

The analysis is divided into five sections. Section 2 reviews the conceptual literature on formalisation frameworks, exploring how notions of livelihood insecurity feature in emerging critiques of formalisation paradigms. Section 3 then focuses on the pitfalls of centralised formalisation paradigms in relation to logging, land use and mining, exploring the proposition that formalising livelihoods becomes more difficult when governance processes produce and enforce schematic distinctions between legitimate and illegitimate livelihoods through highly centralised planning processes. Section 4 examines a case study in Zimbabwe’s gold-mining sector and Section 5 examines a case study in Indonesia’s gold-mining sector. In each case study, the socio-economic and political factors influencing a particular resource regulation policy regime are briefly discussed, followed by a discussion of the factors leading to law enforcement and the impacts on livelihoods during what I propose to term a ‘post-decentralisation’ era. In Section 6, a comparative analysis synthesises the main conclusions, highlighting converging socio-political explanations of livelihood insecurities in contested rural regions. Overall, while formalisation paradigms can impact livelihoods in uneven ways, the conclusions also stress the need to critically conceptualise formalisation as a cross-sector challenge that calls into question the multi-scalar politics of global and national efforts to centralise formalisation regimes. Among other implications, in an era in which responsible national governance is increasingly being touted as a development solution at United Nations (UN) conferences, this study suggests that more careful attention should be given to possibilities for decentralising rural resource governance powers. The study draws upon an analysis of policy documents as well as observations and interviews in the field with officials in national mining and environment ministries, local government departments, donor agencies, UN organisations, NGOs, mining companies, artisanal miners and other constituents in rural mining areas, supplemented by research literature reviews across other sectors.

3 As Mohan and Stokke (2000) argue, dominant narratives of ‘local’ development challenges, in multiple sectors of development, ‘tend to underplay both local inequalities and power relations as well as national and transnational economic and political forces’ (p. 247).

2. Reconceptualising formalisation: Win–win narratives and ‘ordered, gridlike spaces’

While the ‘formalisation’ doctrine – the idea that informal economies needed to be brought into the formal sector and regulated – began to ascend as a priority on the agenda of international development agencies in the 1970s and early 1980s, this doctrine emerged initially to reform economic sectors such as agriculture and manufacturing, whose labour problems had been widely discussed by scholars and development analysts.⁴ Believing the formalisation of property rights to be a win–win situation, numerous global institutions, governments, non-governmental organisations (NGOs) and scholars have been part of an extensive global movement in recent years to encourage and increase the regulation of environmental resources and to formalise economic sectors. One example is the UN Commission on Legal Empowerment of the Poor, created to spearhead efforts at property rights registration and implementation and led by Hernando De Soto; this initiative was recently critiqued by Cousins (2009) for downplaying issues related to the ‘redistribution’ of rights, creating a narrow legalistic vision of ‘empowerment’. In the mining sector, policymakers’ enthusiasm for formalisation led to various new global initiatives in the 2000s, such as the Extractive Industries Transparency Initiative and the Kimberley Process Certification Scheme, both of which were developed with broad support from national governments, NGOs and multinational mining companies to uphold the rule of law and formalise economic activity related to resource extraction (Maconachie, 2009).

In much of the global development policy literature, the alternative to formalisation is not understood merely as inefficiency and a missed opportunity; rather, in many cases, the alternative is understood as nothing less than disorder and *anarchy*.⁵ However, while fear of anarchy may play a part in theory-building, the global enthusiasm behind ‘formalisation’ policy prescriptions can be attributed to multiple rationalisations beyond simply a fear of anarchy. Anderson and Huggins (2003) contend that ‘sustainable development, if it can be defined, is only possible in a legal system where property rights are well defined, enforced, and transferable’ (p. 58). They argue that ‘[p]roperty rights provide the structure that encourages development, innovation, conservation, and discovery of new resources’ (p. 58), suggesting that both environmental and social goals are attained through formalisation processes. As Dyal-Chand (2007) notes, ‘De Soto’s is a conservative claim that, after some initial governmental intervention in the form of registration of property rights, the market will function properly by allowing the poor to accumulate wealth’ (p. 62). Responding to what Platteau

4 Tokman (2007) examines international agencies’ responses to informal sector livelihoods and describe a 1972 report by the International Labour Organization as a catalyst for focus on informal sector programmes among development institutions. This focus on formalisation was initially seen as a rejoinder to the modernisation school of development theory that flourished in the 1950s and 1960s, which held that traditional forms of labour would be phased out as a consequence of economic progress in developing countries; this assumption proved to be false, and the informal sector lexicon was instituted in recognition of the fact that informal sector workforces were not only persisting but also expanding in many regions. De Soto’s books *The Other Path* (1989) and *Mystery of Capital* (2000) are often regarded as two of the most influential books on the informal economy.

5 For example, De Soto writes at one point in *Mystery of Capital* that ‘the only real choice for the governments of these nations is whether they are going to integrate those resources into an orderly and coherent legal framework or continue to live in anarchy’ (2000, p. 27).

(1996) calls the 'evolutionary theory of land rights',⁶ Bromley (2008) contends that emphasis has been misplaced in mainstream thinking about land formalisation, as 'formalization offers little assurance that beneficial outcomes are inevitable' (p. 20).

In critical development studies, an analytic framing that has garnered considerable interest is that of Timothy Mitchell, who examines formalisation of peasant labour activities as a key element of the 'colonial' enterprise (Mitchell, 1991). He focuses on global and domestic power dynamics in the colonisation in Egypt, where foreign experts imposed development ideologies based on 'the peculiar methods of order and truth that characterize the modern West' (Mitchell, 1991, ix). Mitchell's meticulous analysis of the 'invention and reinvention of the peasant' (Mitchell, 2002, p. 123) portrays an 'unnatural' colonial culture of global capitalist expansion, a culture that was premised upon 'disciplining' peasants (in the much-researched Foucauldian sense of 'disciplining') by imposing foreign ideas about universal property rights regimes. The principle of private property, he explains, 'justified a violent exercise of power, and in fact was established by this violence'.⁷ James Ferguson (2007) extends Mitchell's arguments while assessing post-colonial development agendas. He stresses that practices of modern development, driven by neo-liberal ideologies that prioritise global capital investment, reinforce elite knowledge and expertise as development solutions in ways that give poorer communities little political say. Labour regulations have been repeatedly designed according to the dictates of neo-liberal ideology, he argues, where global blueprints are imposed as development solutions with highly inequitable implications. Ferguson's work rethinks urban formalisation regimes in South Africa as regimes that were doomed from the outset by attempting to create 'ordered, gridlike spaces of hygiene and political order' (Ferguson, 2007, p. 72) in places where 'disdain, mistrust, and even loathing' (Ferguson, 2007, p. 72) characterised a dominant relationship between policymakers and planners on one side and people living in informal settlements on the other.⁸ Some of these arguments prove highly relevant to the rural sectors under discussion, where formalisation problems can be understood in diverse ways in different socio-political contexts.

6 Platteau (1996) argues that the dominant framework employed by mainstream economists to understand land tenure challenges in poorer countries is 'the evolutionary theory of land rights' (p. 29) – a theory that assumes that societies evolve towards private individual ownership of land in an equitable fashion over time and that this evolution is a necessary step for development. Platteau critiques World Bank policies that adhere to this theory and argues that 'there is a great risk that the adjudication/registration process will be manipulated by the elite to its advantage' (1996, p. 43).

7 Mitchell writes in particular of the inequalities of land rights acquisition, stating, 'The virtues of a universal right of private property were articulated to support seizing land by force in North Africa. The land could be taken because those who farmed it had not heard of this universal right. The principle of property was presented as the opposite of arbitrary power or coercion, represented by the state ownership of land; but it justified a violent exercise of power, and in fact was established by this violence' (Mitchell, 2002, p. 56).

8 In an essay titled 'Formalities of Poverty', Ferguson (2007) examines transitions in post-colonial urban formalisation regimes in South Africa's informal sectors, noting, 'Where modernist urban planning sought to establish ordered, gridlike spaces of hygiene and political order, it inevitably encountered actual urban realities that included spontaneously constructed and often illegal zones of shacks, slums, shanties, and "squatters"' (p. 72). Later in the article, in what Ferguson identifies as a recent turn in paradigm adjustment, he describes emerging institutional perspectives on planning in which 'the informal economy is not to be overcome or incorporated, but enhanced and expanded' (p. 83); Ferguson calls this a 'striking vision of the future, in which the informal economy is the new, exciting growth sector' (p. 83). (Such a vision of the future thus calls attention to emerging possibilities for policy paradigms to explicitly target informal activities, but he notes that even the visualised policy models for this shift have been subject to capitalistic neo-liberal visions of modern progress.)

3. Formalisation and the ‘national’ scale as a subjective scale

3.1. Scaling the formalisation debate: Rural sectors in the contested logics of the central state

A central contention of this paper is that the benefits – and inequalities – of ‘formalisation’ paradigms can vary when power is centralised, decentralised and recentralised. Doreen Massey’s influential (Massey, 1979, p. 233) question, ‘In what sense are “regional” problems regional problems?’, can be usefully applied to contemporary work on geographical scale by posing the question: ‘In what sense are “national” formalisation problems national formalisation problems?’ Examining this question requires attention to the definitional debates about formalisation as a bureaucratic endeavour as well as scalar constructions (e.g. regulation as a ‘regional’/‘national’ endeavour).

Hilson (2007) analysed the notion of formalization in the ASM sector as a challenge of national law and implementation, using the definition given by Lowe (2005): “Formalization speaks not only to the presence of legislation, but to the activation and enforcement of it by authorities and the extent of their success” (Lowe, 2005, p. 13). This interpretation of formalisation suggests that formalisation can be seen as a double-faced notion, where, on the one hand, *policies* may exist to support economies in formal terms and, on the other, ‘*activation*’ and ‘*enforcement*’ of policy goals may be influenced by a range of factors and where ‘success’ can be politically contentious. While De Soto’s vision of ‘formalisation’ has become a particularly fashionable point of focus among policymakers given his technical and depoliticised vision of property rights, ‘success’ in formalisation implementation may be far from a ‘win–win’ situation for society. As Mitchell argues, national formalisation efforts in Peru enabled wealthier classes of citizens to benefit – particularly entrepreneurial speculators – rather than poorer small-scale producers. The win–win narrative is further troubled by the trend towards national policy supremacy in stimulating market-friendly conditions, rather than local government autonomy in working to address the regional dynamics of rural livelihood planning. In several sectors, international policy conferences and intergovernmental sessions facilitated by UN organisations and World Bank projects have prioritised national-scale governance structures rather than local governance structures. For example, a range of UN and World Bank projects designed to address the small-scale mining sector have focused on what national governments can do to regulate the mining sector (e.g. Spiegel and Veiga, 2010). In the research that led to this paper, I attended more than 30 UN and World Bank conferences on small-scale mining issues where national government actors participated but local government actors did not. In many cases, World Bank and UN project budgets were heavily vested in flying in government officials across continents to create a dialogue that focused on the roles of national governments in relation to local populations while by-passing the issue of local governance structures.

Tacconi (2007) offers a framework for analysing decentralisation in the context of governing forests and livelihoods, arguing that theories of decentralisation have been ‘underdeveloped’ and that the ‘design of decentralized forest management can benefit from further development of the theory in order to clearly outline the potential causal relationships among the many variables involved’ (p. 338). Figure 1 provides a slightly adapted representation of his framework to highlight the

prioritisation of donors and global institutions in relation to central government power dynamics linking economic growth and livelihoods approaches in resource governance.

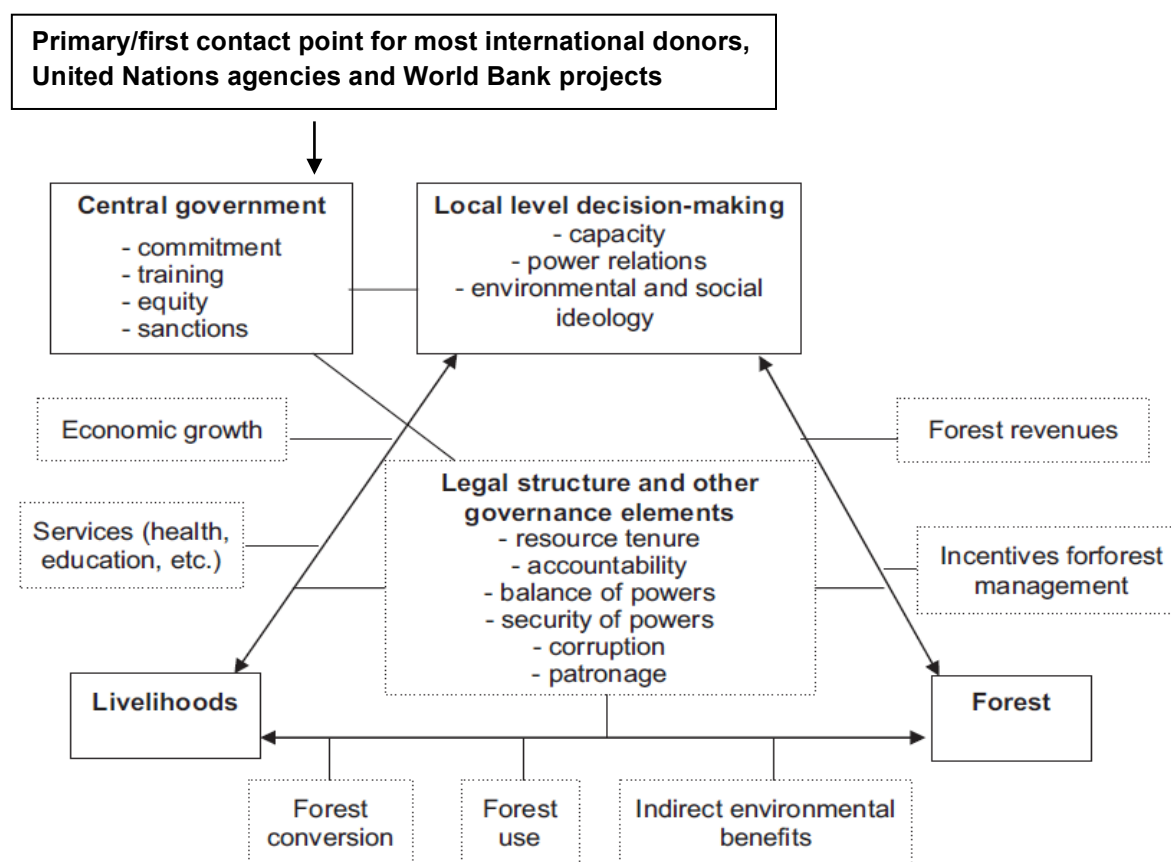


Figure 1. Perspective of decentralisation and central government roles in resource governance

Adapted from Tacconi (2007)

In the figure, the differentiated economic logics of 'economic growth' and 'livelihoods' need not necessarily be seen as constitutive of a gap that is systematically more entrenched in the official decision-making politics of central governments compared with local-level decision-making. However, a number of studies reveal that national authorities have gravitated towards resource capture efforts even after decentralisation policies are supposedly enacted, subverting democratic opportunities for governing livelihoods and environments. Ribot *et al.* (2006) discuss how 'central governments in six countries – Senegal, Uganda, Nepal, Indonesia, Bolivia, and Nicaragua – use a variety of strategies to obstruct the democratic decentralization of resource management and, hence, retain central control' (p. 1864). Cerutti and Tacconi (2008) provide further evidence of how central states (e.g. in the case of Cameroon) fail to make regional distinctions between situations of informal and illicit livelihoods, subsuming both categories under the banner of 'illegality'.

In a similar spirit, a range of studies focused in Indonesia and Zimbabwe have cautioned about the premature rejection of decentralised governance structures and the reassertion of central power. Obidzinski (2004) cautions that, in the early period of decentralisation in Indonesia, five years after the 1999 Autonomy Laws, national authorities had not fully empowered local district institutions to sustainably manage resources, noting that 'decentralization in the forestry sector is being presented as a failure' and that '[p]ronouncing that a new system of governance has failed assumes that the

new system has been fully implemented, and that there is a clear causal relationship between current policy outcomes and the new system' (p. 3). While discourses of local failure can serve the interests of national elites who may aim to reassert control, they also become increasingly contested when economic situations create new pressures. Various studies suggest that Zimbabwe's 'decentralisation' paradigms for rural environmental resource management in the 1990s ultimately failed on account of not only local district capacity issues but also power dynamics relating to both national and global institutional decision-making. CAMPFIRE, the Communal Areas Management Programme for Indigenous Resources, is a programme for decentralised wildlife management, one that ostensibly was designed to empower Rural District Councils. Balint and Mashinya (2006) argue that 'withdrawal of outside agencies responsible for oversight and assistance' had a considerable influence on the failed CAMPFIRE devolution model, as did failure of local leadership and national governance deterioration (p. 805), providing a multi-scalar analysis that invites attention to the fragility of local governance support structures.

3.2. Interpreting challenges in small-scale mining: Visions of informalisation versus illegality

In recent years, the World Bank and various governments have promoted the notion that artisanal and small-scale mining (ASM) – usually understood as low-tech mineral extraction involving limited or no economic capital investment – should be formalised (USAID, 2010). This position sounds well intentioned, but it can be seen as quite paradoxical once it is recognised that miners would need to have incentives to register, and such incentives would likely require some degree of government capacity for adapting to the diverse concerns of unlicensed miners. More than 90% of the world's ASM population operates without licences (Hinton, 2006). The idea that miners should self-register, although perhaps useful, is not a solution that can be conceptually divorced from broader debates about institutional responsibilities (across multiple scales) to ensure that the benefits accruing to miners are equitably and effectively distributed. Table 1 lists some of the numerous complexities that inhibit legislative mechanisms for tackling the issue of ASM.

Table 1. The balance of arguments for formalising ASM: Common arguments

Demand mechanisms for formally legalising ASM	Obstacle mechanisms that inhibit ASM legalisation
Existing mining code and environmental laws can help communities	Tradition of miners to operate individually and without seeking permits
Enforcement of laws, regulations and standards by the authorities	Illiteracy of miners
Possibilities that formal large- and medium-scale operations will drive informal miners out of their mining sites	Access to concessions is limited especially in mineral-rich areas
Passage of pending legislation	Rare visits and inspections of ASM mines
Local pressures for improved environmental performance	Miners feel there is little difference between being legal and illegal
Danger of being subject to extortion	Costly and difficult procedure to gain and maintain legal status
Initiatives among firms: shift to legalisation and environmental self-regulation	Miners' fear of being taxed fully if legalised
Requirement to sell minerals to certain agents (whether legal or illegal)	Free access to most convenient buying agents (incl. non-licensed) as informal enterprise
Formalisation creates opportunities for development agencies to assist workers	Informality helps to maintain flexibility in shifting from one mining site to another

Adapted from Hentschel *et al.* (2002)

Much of the scholarship addressing unlicensed mining has a tendency to portray small-scale mineworkers indiscriminately as irresponsible and ‘predatory’ (Laurance, 2005, p. 645) while recommending that national governments eliminate unlicensed extraction. The law is frequently treated as an unproblematic tool for solving an obvious social ill. To tackle unlicensed ASM, implementation of existing legislation is often perceived as a priority, and academic journals have published an extensive array of studies that urge the introduction of strict regulations, sometimes with titles of peer-reviewed articles decrying ‘illegal mining’ (e.g. ‘Influence of illegal gold mining on mercury levels in fish in North Sulawesi, Indonesia’⁹). It is only relatively recently that an opposing force in the scholarly community has begun to emerge, one that recognises ASM as ‘a magnetic force in rural labor markets’ (Bryceson and Jonsson, 2010, p. 379) and an ‘employment engine’ (Hilson and Banchirigah, 2009, p. 184). Within this community, unlicensed ASM is seen as an activity that can contribute to rural development in positive ways, despite its informality and sometimes because of its informality. For some writers in this group, unlicensed ASM is not dismissed negatively as anarchic and illegal, but rather, it is understood as work that has logic within the informal sector, where poorer workers’ attempts to resist deep marginalisation serve as a livelihood or survival strategy that should be ‘nurtured’ and allowed to ‘flourish’ (Tschakert, 2009, p. 24).

It is in recognition of the excessive rigidity in regulatory frameworks that Hilson and Banchirigah (2009), Tschakert (2009) and others have emphasised a growing need for more studies on the institutional complexities of formalisation. Sinding (2005), discussing this need, explains that perceptions of law matter a great deal and that mineral tenure systems must ‘be seen to be equitable, in the sense that artisanal miners must believe that they can get to the local or regional office that awards mineral tenure and that their claim to a particular piece of land will be swiftly granted and recorded’ (p. 249). Siegel and Veiga (2009) offer an optimistic concept of formalisation in similar fashion, stating that formalisation should be seen as ‘the means of absorbing existing customary practices—developed informally by miners—into the mainstream of a country’s legal and economic affairs’ (p. 51). At the same time, Siegel and Veiga (2009) acknowledge that formalisation can sometimes be seen as ‘imperial’ (p. 53). They also recognise that formalisation can be expensive to facilitate due to high costs for licensing and bureaucratic procedures. This point is also made by Clausen *et al.* (2011), who note that formal licensing might still simultaneously be seen as a necessity in situations where the absence of legally recognised resource rights impedes locally desired development trajectories.

Yet, as the meanings and processes of formalisation are disputed, formalisation can be seen, ultimately, to be whatever state governments define as key in order to encourage, pressure or force unlicensed miners to adhere to laws. A growing body of scholarship documents how police and military strategies to control illegal mining, particularly in Africa, are core features of formalisation doctrines, as these are commonly prioritised state mechanisms for enforcing the principles of private property and legal statutes on resource management. While these trends are extensively documented, for instance, in the context of national government policing efforts in Ghana (Hilson and Yakovleva, 2007; Bush, 2009) and Angola (Le Billon, 2008), Zimbabwe and Indonesia provide particularly important and timely case studies for investigating global narratives of formal law and order in the mining sector.

9 Kambey et al. (2001)

4. Case study: Contested ‘formalisation’ policy in small-scale mining communities in Zimbabwe

The formal regulation of mining has long been recognised as an important component of Zimbabwe’s development. One of the key enduring legacies of colonisation was the prioritisation of mining as a central pillar in the national economy (Hollaway, 1997). Zwane *et al.* (2006) observe that ‘the Mines and Minerals Act [developed initially under colonial rule] remains the most powerful legislation’, such that mining laws continue to override policies for other resource sectors and in other institutions (e.g. agriculture, tourism, etc.). They note how, historically, and largely as a legacy of colonisation processes led by Cecil Rhodes, mining interests have been given priority status in land disputes – particularly along the Great Dyke, a geological feature that runs north/south through Zimbabwe, where 95% of mineral-rich areas are under concession by large and medium-scale companies (Zimbabwe Miners Federation, 2007). Economic Structural Adjustment Programmes (ESAPs) implemented by the Government of Zimbabwe under the auspices of the World Bank continued to prioritise mining. ESAPs explicitly included a policy agenda that created a favourable climate for foreign mining investment in order to boost economic growth, and this growth would, it was hoped, lead to equitable development in rural areas. As Chifamba (2002) observes, the ‘liberalized’ structure of Zimbabwe’s mining industry manifested as an ‘oligopolistic mining industry’ that favoured foreign companies instead of indigenous workers. Dreschler (2001) has likewise noted that Zimbabwe’s mineral industry ‘is dominated by large mining companies’ (p. 157) even though ASM involves a larger labour force.

However, notwithstanding that most of the country’s mineral titles remain owned by large companies and not small-scale mineworkers, it is still widely recognised – in international literature on small-scale mining – that in the early 1990s, the Government of Zimbabwe took a series of proactive measures to support and legally recognise indigenous ASM populations. In 1993, the ‘Harare Guidelines on Small-Scale Mining’ became an exemplary illustration of forward-thinking governmental approaches for poverty-reduction-oriented development assistance for ASM workers; these guidelines have been heralded as a useful model around the world, referenced in literature on ASM across Africa (Dreschler, 2001; Hinton, 2006) and even in research literature discussing mining policy options in Asia (Burke, 2006). The policy vision expressed in the Harare Guidelines reflected the vision shared by government agencies and development institutions to promote the legalisation of ASM activity and recognise it as a poverty-alleviation activity. With this vision, in the 1990s, international development institutions including German and Swedish donor agencies began to work with the Government of Zimbabwe on development projects to encourage more sustainable ASM activities. These collaborative initiatives tended to be technical in nature, combining the goals of promoting safer environmental management and developing policies for ASM legalisation, with a focus on two types of gold-mining: alluvial gold panning in riverbeds and small-scale primary ore extraction on land.

4.1. Decentralised policy approach for riverbed gold panning

In 1991, after several international donor agencies became involved in Zimbabwe to address mining policy developments, the Central Government of Zimbabwe legalised one of the more rudimentary forms of artisanal gold-mining: riverbed gold panning. Specifically, the government promulgated

Statutory Instrument 275 of 1991 (Alluvial Gold Panning in Public Streams). This statute created a legalisation regime wherein local governments would issue licences to gold panners. Supporting gold panners in this way was understood as the best means of controlling smuggling and mitigating environmental risks; in addition, local governments had the duty of coordinating training centres, which also served as gold-marketing centres for panners. Maponga and Ngorima (2003) optimistically explained that ecological challenges could be ‘overcome’ through a combination of ‘legislation and education’ measures that could help panners become licensed. Under Statutory Instrument 275, the central government authorised Rural District Councils to issue licences to riverbed gold panners independently of the Ministry of Mines and Mining Development.

Although the Ministry of Mines and Mining Development also issued its own gold panning licences, which in some cases led to confusion and overlap between central and local government licences,¹⁰ the significance of Statutory Instrument 275 was such that local government officers were able – for the first time – to have autonomous licensing powers in the gold extraction sector. This not only overturned the colonial legacy in the sense that district governments were being empowered in the context of minerals development – a sector that was historically controlled by a small number of centralised decision-makers; it also overturned the colonial policies that forbade independent gold extraction by black African workers. It also created a space for new kinds of international development linkages. ITDG and SNV became active in providing technical assistance in Insiza District (Figure 2), with German consultants heading a programme focusing on educating panners on ways of reducing siltation and minimising other ecological impacts.

Researchers have suggested that education services for panners in Insiza District proved to be particularly promising early on (Maponga and Ngorima, 2003). Although other districts did not adopt the same intensity in developing licensing and education programmes, and in fact most districts failed to license the gold panners,¹¹ the Insiza District Council was widely seen as the most active Rural District Council in managing licences for riverbed panning, one that other districts should follow.¹²

4.2. Policy approach for small-scale primary ore mining

In addition to policy reforms for riverbed panning, other early indications that government institutions were willing to work with informal workers proactively can be seen in how donors and government engineers engaged with small-scale gold reef miners (primary hard rock miners) to create community mineral processing centres. As Hilson (2007) notes, ‘The Shamva Mining Centre in Zimbabwe...was, at the time of its construction, heralded by many as the most significant support service provided for small-scale mining to date’ (p. 242). As one of the most widely cited examples of an international donor-funded project to set up a gold-processing mill for ASM workers, Shamva was viewed by researchers initially as a proactive step towards improving environmental management and economic efficiency through technology-sharing (Svotwa and Bugnosen, 1993). Developed as an idea by ITDG and GTZ in 1989 and further developed in the early 1990s, a key goal of the Shamva

10 Interview with Local Government Officer in Insiza District, April 2009

11 Interviews with the President of the Local Government Association, April, 2009

12 In most districts, district governments did not develop licensing policies for the riverbed panners at all, and left that job strictly to the Ministry of Mines and Mining Development. However, the Local Government Association had publicised the successes of the Insiza District model and encouraged other districts to develop similar local management systems for gold panning.

project was that central processing units could help bring illegal mining into a legal framework and create a more centralised, organised and easily regulated way of processing gold; it was believed that this could, in turn, help control mercury usage and facilitate access to more advanced technology that would raise incomes. Shamva was heralded as a 'best practice in small-scale mining' by the UN Economic Commission for Africa (UNECA, 2002) in its early days and Hentschel *et al.* (2002) describe how incomes of artisanal miners initially rose by up to 30% in the early phase of Shamva's operations.

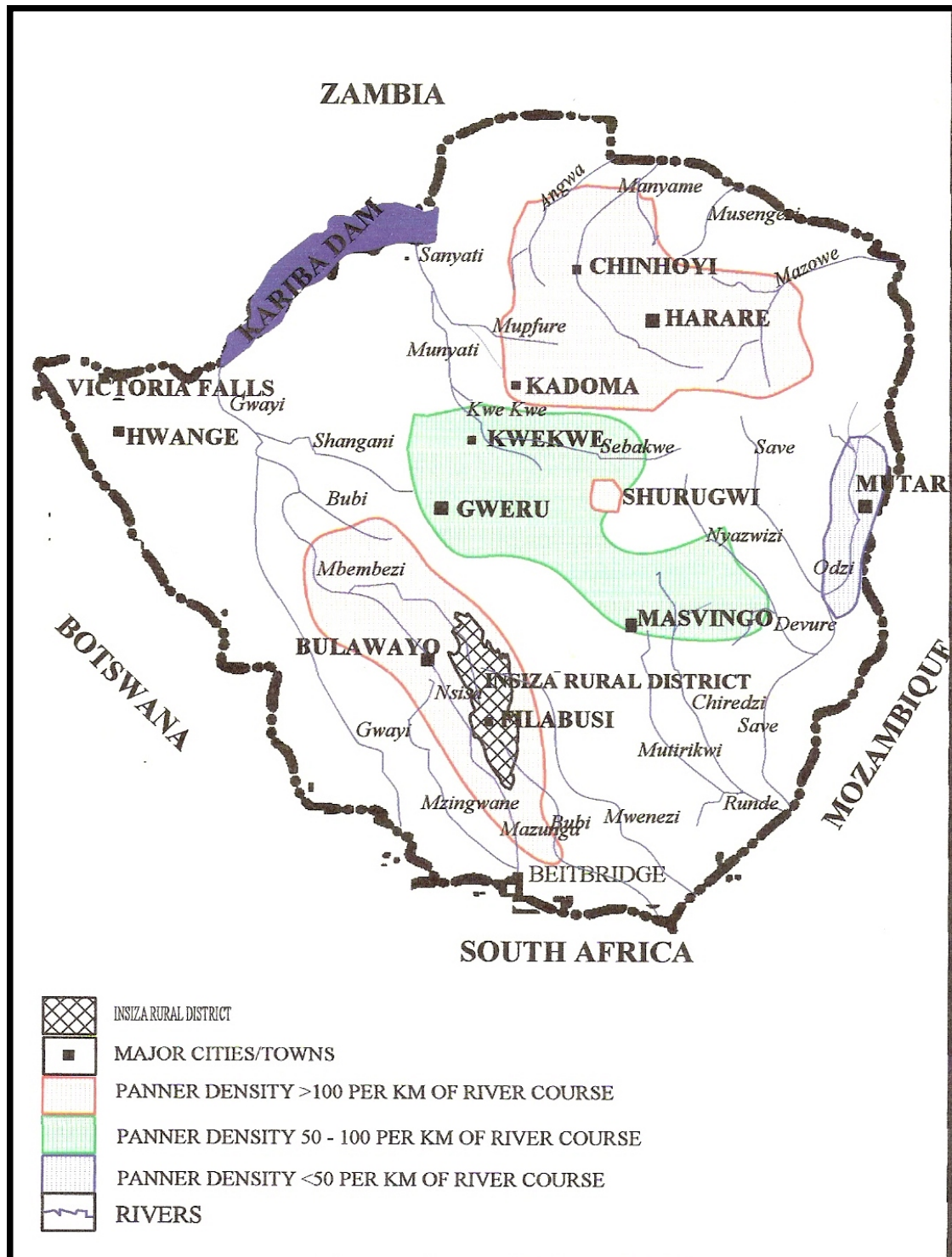


Figure 2. Location of insiza district and other gold panning areas

Source: Sivotwa and Mtetwa (1997)

Critical analyses of the Shamva project have called attention to multiple problems in the execution of the development vision over the long term. This has been attributed, in part, to very high demand for the milling services. Hilson (2007) explains that despite being originally 'constructed to service approximately 40 local gold miners', actual demand for ore processing at the Shamva Mining Centre soon exceeded '500 small-scale operations' (p. 242). This excess demand, in turn, created lengthy waiting times of up to six weeks to process ore. The failure to align the mill with local demand led to disappointment among workers, and the long waiting times ultimately precipitated a reversion to poor methods of mercury usage in the amalgamation process and created environmental and human health problems (Hilson, 2007). Mugova (2001), in a presentation to international donors, blamed the national government for inadequate planning and insufficient support. Other critics have suggested that foreign donors and government actors were too quick to transfer the management of the milling centre to a local association of miners. As Dreschler (2001) contemplates while assessing the Shamva experience, 'there is need for development agencies to rethink whether it is always necessary to hand over commercial projects to producers associations' (p. 10). He further explains the lessons from Shamva as follows: 'Producers may well be better off to leave the management of commercial projects to experienced and qualified managers while they enjoy an efficient and competitively priced service. Great care has to be taken in working with associations to ensure that a few powerful people in the association do not monopolise benefits created for individual gain' (p. 10).

Better initial research by the development agencies, Hilson (2007) argued, could also have helped to determine community-specific needs and to avoid some of problems of excessive demand encountered at Shamva. Ultimately, Shamva's poor management not only created a scenario where too many miners were waiting for gold processing and where distrust developed as a consequence; the executive committee running the mill ultimately decided that the only way to make the mill work would be to set a minimum amount of ore that miners had to bring in order to be eligible to use the facility. Those bringing less than 10 tonnes of ore could have their ore milled only during slack periods. This decision ultimately prevented poorer artisanal workers from benefiting from the centre. According to interviewees who still mine for gold in the area and who recall the Shamva Centre experience with a sense of there having been an opportunity lost, the mill centre's management was eventually shifted from donors to a group of 'established' small-scale miners who were 'not concerned' about the poorer workers. This eventually created distrust in the management of the mill, which, over time, led to under-utilisation and abandonment.¹³

Interviews at other mills confirm that Shamva's problem was not an isolated case. Similar criticisms are expressed by mineworkers who were involved in other projects, who have argued that outsiders (government agents, donors and foreign experts) need to be more sensitive to complexities of miners' organisational structures when promoting labour formalisation and technology improvement. Just as donors pulled out prematurely from the Shamva project, an EU-funded gold milling project in Insiza District suffered a similar fate. Confusion, mistrust and poor management at mills are frequent concerns in the country's gold-milling sector; indeed, past literature has indicated that relationships between miners and mill owners are particularly poor because the former often accuse the latter of deliberately keeping inefficient gold extraction technologies at the mills (to maximise profits for the owner) (Mtetwa and Shava, 2003). While management of donor-supported milling centres was poor at the local level, these concerns are frequently expressed with different

13 Interview, Bindura, April 2009

levels of blame being directed at government agents and international donors, which both had short-term visions and interests in 'quick-fix' solutions for the sector.

Notwithstanding the above problems, the 'assistance-oriented' intentions behind the above projects still stand out as examples of the hope and enthusiasm behind formalisation initiatives in the 1990s and the early 2000s. Such programmes indicate that the Government of Zimbabwe had been active in assisting gold miners, considerably more active than many other African governments, which generally had experimented neither with riverbed panning legalisation programmes at the district level nor with donor-supported gold-processing centres. These projects complemented other proactive policy measures to develop sector support systems, and it is particularly noteworthy that at various points in the early 1990s, the Government of Zimbabwe kept gold prices for small-scale miners at favourable rates to minimise smuggling, which created incentives for miner legalisation and registration; in fact, the government even had a special 'support price' for gold that small-scale miners sold to the Reserve Bank in the 1990s, which was at certain times higher than international market prices. This pricing policy was devised both to encourage industry growth and to increase government gold collection (Dreschler, 2001). These kinds of proactive policies gave outside agencies the sense that the Government of Zimbabwe was actively seeking to encourage informal workers to participate in the formal economy, and thus, they gave donors a sense of confidence in becoming involved in the small-scale mining sector.

While confidence among donors led to a variety of international assistance programmes, the last donor project – before an eventual cessation of donor support in this sector – came to fruition in 2005, when the UN Industrial Development Organization (UNIDO) worked with the Ministry of Mines and Mining Development and the University of Zimbabwe to begin developing a 'Train-the-Trainer' programme in gold-mining communities in the Kadoma-Chakari area. This programme (on which I worked) encouraged educational services on issues ranging from pollution-reduction technologies to business and organisational training (Spiegel and Veiga, 2005). This United N effort was part of a larger global initiative – the 'Global Mercury Project' – and it was focused on reducing the use of mercury in gold extraction, as mercury pollution has been identified as one of the most severe environmental concerns in Zimbabwe's mining sector (Gunson *et al.*, 2006). The early experiences of the Global Mercury Project suggested that, relative to other countries (e.g. Tanzania, Sudan, Indonesia, Brazil, Lao People's Democratic Republic), Zimbabwe had some of the highest levels of mercury pollution and human exposure to toxic risks (Gunson *et al.*, 2006). At the same time, sociological and socio-economic assessments conducted by UN consultants (Hinton and Veiga, 2004; Mtetwa and Shava, 2003) showed that Zimbabwe had – relative to other countries in sub-Saharan Africa – some of the highest levels of education, literacy and infrastructure in the mining sector, which could help in developing formalisation programmes. Zimbabwe also had some particularly notable experiences with government microfinance programmes for miners which, although imperfect and subject to institutional problems in service delivery, as some miners emphasised in my interviews,¹⁴ became profiled at a UN conference as one of the most proactive examples of how formalisation could lead to benefits such as credit access. The conference, which was hosted in the town of Kadoma and which brought together government officials and UN training staff from

14 As one miner noted in an interview that focused on the microfinance facilities managed by the government, 'A few of the small-scale miners in Zimbabwe received loans [from a government-managed micro-loan programme] just before the election. It was actually an election-motivated decision, to try to show a good face... In the end I don't think the loans were used for mining equipment like they were supposed to be. Some people got nice cars with those loans... it was not the people who needed the loans' (Zimbabwean small-scale miner, interviewed April 2009).

Tanzania, Zimbabwe and Sudan, included a special presentation from an official from the Zimbabwe's Mining Industry and Loan Fund (MILF). MILF offered a variety of cash loans for developing small-scale mines, equipment loans and other types of business loans that were specifically tailored for small-scale miners. Since MILF was housed within the Ministry of Mines and Mining Development, it stood out as a rare example of a loans facility that could integrate sector-specific training and credit delivery to mineworkers.

As participants at the conference generally agreed, other countries in Africa would be well advised to explore ways of emulating the MILF model, and a Tanzanian government representative, in particular, explained that this would be a good model to copy in Tanzania's Ministry of Minerals and Energy. In other words, in 2005, there was some degree of talk at international conferences of Zimbabwe as a leader in Africa's gold-mining sector – a leader that was simultaneously creating incentives and rewards for artisanal miners to become formalised while inspiring other countries' policy development in the region. While it can be said that the more organised and wealthier small-scale miners tended to benefit more from licensing laws, even the unlicensed miners had some degree of access to some of the education programmes that the government had developed – suggesting to some that positive interaction with the 'informal' miners had been nurtured.

4.3. Recentralising power and formalisation policy reversals: A turn towards criminalisation and crackdowns (2006–2010)

If the above policy developments present cause for some optimism in Zimbabwe's gold-mining sector, the situation by 2007 reflects a drastically different scenario. As inflation levels began to ascend dramatically in 2006 and 2007, problems began to multiply for miners, perhaps most vividly illustrated by this fact: the government insisted that gold miners sell their gold to the Reserve Bank of Zimbabwe at a tiny fraction of the actual international gold price, sometimes even as little as one thirtieth (1/30) of the true international price when calculated at parallel market rates (as discussed in detail below). Accusations of corruption within the MILF programme also intensified. Furthermore, riverbed panning was made completely illegal in 2006, when the Central Government repealed the law (Statutory Instrument 275 of 1991) that allowed Rural District Councils to issue permits for gold panning.¹⁵ In fact, in mid-2006, district council officials in Insiza District informed me that I was the first person to let them know that the central government had repealed this law; the central government had not even informed the district government of this legal reform until several weeks after the repealing of the law. The local government coordinator who had been responsible for overseeing gold panning was, in an interview in 2006, disappointed to hear of this legal change, even wondering out loud: 'Does this mean that my job is finished?... Is the local government supposed to work with the [gold panners] or not?' Further discussions in 2007 and 2009 with officials within the Insiza District Council would again confirm that the district still had no power to manage gold-mining, despite widespread desire in the community to engage in panning. The local government was powerless to change the law and, although some local government council members spoke of hopes and even plans of re-legalising riverbed panning, they noted that 'the

15 Repealing Statutory Instrument 275 did not automatically mean that the central government would refrain from issuing permits to companies that might want to engage in alluvial riverbed mining. Reportedly, according to some panners whom I interviewed, Chinese and Russian companies have been allowed to do panning in some parts of the country, for instance in Chimanimani area, but central government spokespeople did not confirm that permits were given explicitly for panning purposes in those areas.

decisions would have to be made in Harare’ and that trying to convince Harare authorities could be a long process and a difficult task – if not an impossible one.

Soon after the move to criminalise riverbed panning in 2006, political tensions intensified in new, unprecedented ways. Citing a multitude of economic, social and environmental rationales, the government launched a nationwide crackdown against gold panners, gold miners and gold traders at the end of 2006, during the week before Christmas. The operation was widely seen as a ‘surprise’ for miners as well as for local government officers, many officers within the central government and others. The crackdown, within its first few months, left thousands of people jobless. Crime escalated as a result of the crackdown in some contexts; in other contexts, gold-mining was simply forced into being a night-time activity to evade arrest; in some contexts, riverbed gold panners turned to primary ore gold-mining in remote forest areas to evade police; and in other contexts, miners were imprisoned for as long as five years for illegal possession of gold.

In the media, the Zimbabwe’s mining sector governance became increasingly characterised as part of a ‘brutal regime’ of ‘pillage and patronage’ with injustices abounding in the governance of mineral resources (Sokwanele, 2007, p. 1). The title of the crackdown was ‘Operation Chikorokoza Chapera’ (Stamp Out Illegal Mining) and involved the arrest of tens of thousands of miners.¹⁶ The government’s emphasis on formalising gold-mining, rather than being a process for empowerment of the poor within the mining sector, became more clearly visible as a process of control and coercion. Following are three examples of the crackdown’s highly contentious implications.

1. **Corporate mining model for ecological modernisation as a barrier to livelihood formalisation:**

One impact of the crackdown – one fiercely contested by the members of the Zimbabwe Miners Federation and the Zimbabwe Panners Association – was imposition of a uniform Environmental Impact Assessment (EIA) requirement that all miners had to complete prior to resuming mining operations. The uniform set of EIA requirements meant that a consultancy report had to be paid for to meet all the EIA stipulations (usually costing at least 4,000 US dollars) and artisanal and small-scale miners also had to pay a government fee. This model for the EIA, which corresponded to the EIA system that was designed in the late 1990s by the Canadian International Development Agency (CIDA) in conjunction with the Government of Zimbabwe as part of a mining reform strategy, did not take into account the different kinds of artisanal and small-scale gold extraction practice (for instance, the EIA model did not even address the issue of mercury use) (Spiegel, 2009) and served as a rationale that the Ministry of Environment and Tourism – as well as police squads – used when cracking down on mining communities.

2. **Licensing specifications and the uneven distribution of winners and losers:** A second major impact of the crackdown was the increased concern in mining communities about the inequalities in accessing licences. Some artisanal miners did not have a licence but depended on a relationship of trust with registered gold millers; however, many of these relationships (e.g. in the Kadoma-Chakari region) worsened when police began cracking down and demanding payments. A separate but related issue was the particular technical specifications and bureaucratic processes associated with registration and licensing. While the major concern among miners was about institutional problems at the central government level, many miners indicated clearly that they would like to become ‘legal’ – even if it meant paying more taxes to the government – but they were not sure how. In some cases, the limitations that miners

16 In 2007, the number was above 35,000, according to the government. In August 2008, the government announced another 9,000 arrests of diamond and gold miners.

identified also related to the fact that particular spatial dimensions of licensing laws were technically biased in favour of larger-scale operations. As one small-scale miner noted in Zimbabwe, once prospecting work is done to ascertain the geological potential in an area, the Mines and Minerals Act stipulates that there is a minimum size for the mining claim when miners engage in pegging – the process of marking the boundaries for a licensed mining claim:

The minimum for pegging is 10 hectares. It is too large... The minimum should be 5 hectares. It's hard to find good areas that aren't pegged you know... There are some [mineral-rich regions that aren't pegged yet] but it's too close to [environmentally] protected areas or off limits for other reasons. There are pegged areas with [larger mining companies] that have certain shapes that make it hard to work around them [he sketches a map for me to see]. Just 5 hectares is better. (Interview, April, 2009, Harare, Zimbabwe)

3. **No foreign donor support and no rural governance support:** During and after various police crackdowns, questions arose as to whether re-legalising panning could be a viable strategy for managing risks more appropriately. Although donor support was provided to governance agents in the 1990s, Rural District Councils found during 2006–2012 that there was no longer any support – either from the central government or from donors – for regulating and managing risks associated with gold panning. While Insiza District Council members spoke of plans in 2009 of re-legalising gold panning, this would only be possible if central government authorities approved their request, which would be conditional upon the central government believing that local capacities were in place to legalise panning. As no support was available for empowering district governance structures (CIDA and other donor agencies were no longer involved; interviews with donor agencies confirmed that most donors are waiting for the national political situation to change dramatically), local authorities remain unsupported and panners continue to have no option but to operate illegally.

5. Case study: Contested formalisation policy and small-scale mining livelihoods in Indonesia

5.1. Formalisation in Indonesia's mining sector

This section further discusses how national paradigms for formalising economic activity can misrecognise labour realities in small-scale mining areas. It focuses on situating the politics of regulating resource extraction within the context of Indonesian policy reforms that were ostensibly designed to promote 'governance decentralisation' and 'local rights', followed by efforts to 'recentralise' power in more recent years. Mining has long taken in place in Central Kalimantan, Indonesia's third largest province, and this section focuses on a specific region in Central Kalimantan called Galangan, located about 100 km (90 minutes' drive) from the provincial capital, Palangkaraya (Figure 3).



Figure 3. Location of Palangkaraya in Indonesia

Since 1997, no state companies or commercial companies have been interested in mining the same resources that small-scale miners have been mining – gold. Thus, this particular case provides a contrast to many of the gold-mining sites along Zimbabwe’s Great Dyke, where companies actively compete with ASM workers for territorial control. Paradoxically, however, even as no companies have recently made formal claims on gold extraction rights in this area, mining companies’ advocacies about the need to police unlicensed ASM (for economic, environmental and social reasons) have been significant even in this case, as conveyers of influence on governance from beyond Galangan’s borders. Identities of different types of miners in Indonesia’s gold-mining sector have been shaped by discourses and institutional processes that cut across regional and global scales and this, in turn, has shaped an uneven mining regulation regime that largely makes the ‘formalisation’ of resource rights beneficial to more economically well-off constituents in the industry rather than poorer ASM workers.

Tania Li’s discussion on dominant law enforcement discourses and legalistic rights discourses in Indonesia suggests that law can serve as a ‘problematic basis for justice’ (Li, 2002, p. 278). While this sentiment can be seen as a powerful expression of inequality in both Zimbabwe and Indonesia, the section below highlights several differences from contexts in Zimbabwe while also showing similarities. Among other differences, in the region I studied in Indonesia, no registered small-scale mining associations had existed in recent years, whereas in Zimbabwe, as we saw, formally registered small-scale gold-mining federations existed and had lobbied for their interests and rights with some impressive degree of organisation; thus, prospects for ‘decriminalising’ gold miners and regional social mobilisation dynamics necessarily have to be conceptualised in different forms. As in Zimbabwe, Indonesia’s small-scale miners have been heavily criticised on environmental grounds, at times to the point that entire bans on certain kinds of small-scale mining have been adopted.

Past studies in Indonesia have called attention to the inequalities in central state dominance in formalisation. Analysing the geographical combination of factors in this respect calls into question Central Kalimantan’s uniquely prominent place in global movements to enforce environmental protection law and associated efforts to use what Elmhirst (1999, p. 831) calls the ‘conceptualized space of the state’ as a basis for spatial control. This discussion of state roles in Central Kalimantan thus draws on debates about the limits of past environmental governance regimes in the region. While McCarthy (2004) examined how ‘decentralisation’ policies contributed to ‘the emergence of volatile socio-legal configurations in Central Kalimantan’ (p. 1199), focusing on the governance of illegal logging and community forestry practices, little research has addressed how contested socio-legal configurations impact small-scale miners’ livelihood challenges in Central Kalimantan. I consider the relative significance of different regulatory pressures on these challenges and their environmental, economic and socio-political dimensions, suggesting that ASM in Central Kalimantan should be understood in relation to what Elmhirst (2001) calls a contested control dynamic whereby elites ‘capitalize’ on ‘uncertainty’ while ‘livelihood vulnerability...has been intensified through the reassertion of place-based cultures of resource control’ (p. 284). Ultimately, the section argues that the *non-recognition* of poorer groups’ resource rights in contested space can be conceptualised as a dynamic problem, one that has been shaped by changing ‘recentralisation’ power dynamics in planning and governance, with evolving implications for controlling resources and restricting livelihood possibilities.

5.2. Contextualising mineral regulation debates in Indonesia

5.2.1. Mining in Indonesia and people-centred approaches in the literature

Past research in Indonesia has highlighted a heterogeneous array of advocacies explaining why government authorities should do more to ensure that 'indigenous people' benefit from mineral wealth and in more sustainable ways (Burke 2006; Erman, 2007; Yasmi *et al.*, 2005). Yet, despite frequent agreement on the vague assertion that indigenous populations should benefit from mineral resources, the idea that indigenous workers should be empowered more as active participants who labour within the mining sector has received conspicuously mixed levels of support (Downing *et al.*, 2002; O'Faircheallaigh and Ali, 2008). This discrepancy has arisen particularly as environmental and social problems associated with unlicensed ASM activities have remained locked in uneasy debates. Such activities, typically undertaken by Indonesian workers (villagers and migrants) and referred to as 'illegal mining', have expanded over the past decade in numerous regions of Indonesia (Aspinall, 2001; Etemad and Salmasi, 2003; Sulaiman *et al.*, 2007). Many arguments have been put forward to police 'illegal miners' more severely, as advocated by large mining companies, which criticise how small-scale miners cause problems by operating on company-owned lands; companies widely argue that this deters foreign investment (Bhasin and Venkataramany, 2007; PricewaterhouseCoopers, 2006). Scientific literature has often directly and indirectly bolstered this corporate advocacy through industrial and ecological modernisation discourses; extensive literature, for instance, has emphasised problems with rudimentary gold-mining such as pollution and land degradation and suggested that risks occur due to a lack of regulatory enforcement by Indonesia's government (Kambey *et al.*, 2001; Edinger *et al.*, 2007; McMahon *et al.*, 2001).

Despite the common advocacy to enforce existing laws immediately, a more recently emergent body of research has suggested that Indonesia's 'informal' – unlicensed – mining sector can provide crucial income-earning opportunities to rural workers and that governance approaches and property rights regimes must be revised to be more sensitive to communities that depend on informal ASM as a poverty-alleviation activity (Aspinall, 2001; Yasmi *et al.*, 2005). Some recent studies in the region have also suggested that environmental protection models particularly have suffered due to their inattentiveness to the concerns of vulnerable mining communities in the informal sector (Burke, 2006; Erman, 2007; Sulaiman *et al.*, 2007). Influenced by a growing literature on community-based natural resource management (CBNRM), largely in the forestry sector, debates about governance, poverty and environmental sustainability in Asia have increasingly emphasised a rights-based approach, in which equitable development is strongly associated with individual and community rights (Nomura, 2008). While local miners' livelihood aspirations have not featured prominently in Indonesia's rights-based or CBNRM literature to date, understanding the contemporary governance of resources requires moving beyond the discussion of impacts from resource extraction and governance challenges in theory. It also requires a close contextual understanding of institutions that address mineral extraction and mechanisms by which they respond to competing priorities and views on labour and rights. In the sections below I contextualise these concerns by looking at historical influences on the development of mineral governance regimes first in the pre-decentralisation era, then in the decentralisation era, and then in what I call the 'post-decentralisation era'.

5.2.2. Influences in the development of mineral governance institutions

While colonial-era governance regimes created highly centralised systems for licensing minerals and allowed only elites to participate in mining development, the development of the mining sector was far more vigorously pursued in the post-colonial era.¹⁷ In 1958, the Government of Indonesia passed Foreign Investment Law No. 78, which sought to boost investment, but, given the an unstable political and economic climate, the law did little to attract major international mining investors at the time (Etemad and Salmasi, 2003). Following the abortive coup attempt of 1965,¹⁸ the New Order Government under President Suharto carried out sweeping reforms in the resources sector, creating new regimes for mineral exploitation. In 1966, the Temporary People's Consultative Assembly passed Decree No. XXIII, reforming economic policies for the purpose of reviving the resources industry in the wake of the crisis. The decree provided that natural resources within Indonesia shall be exploited so they can be turned into 'national economic development' and stressed that investment capital and expertise from abroad must be sought. Based on the decree, two laws were introduced to replace Law No. 78 of 1958 and Law No. 37 of 1960: Foreign Investment Law No. 1 of 1967 and Mining Law No. 11 of 1967.

The above laws have come to be regarded as decisive influences in Indonesia's economic development history, particularly as foreign developers were strongly encouraged to participate in the mineral sector and granted the majority of the country's mineral rights. The heavy prioritisation on foreign investment in Indonesia – which is among the world's top 10 producers of gold, copper, nickel and tin – was continued and even more vigorously championed through World Bank-promoted structural adjustment reforms pursued during the financial crisis in the 1990s (Tsing, 2005; Watkins *et al.*, 2006). As officials lamented the low-level capacity of the state, Article 10 of the Mining Law stipulated that development of strategic and vital minerals could be undertaken

17 Initiated by Indians and Chinese in Sumatra and Kalimantan, mineral exploitation was expanded during the Dutch colonial period from 1695 to 1942, and historical records suggest that many of the mineral developments conducted nowadays are continuations of mines established during the Dutch colonial period. The influence of the Dutch administrative system can also be found in aspects of mining laws as they are applied today; in particular, the aspects of mineral law that authorise the central government to issue mineral permits for gold and that grant the provincial government the right to issue limestone and clay development permits provide some of the clearest proof of this influence. As technocratic scientific literature often oversimplifies or omits the discussion of historical influences on contemporary policy institutions and of global political pressures that shape domestic resource management frameworks, it has been argued that no study of Indonesian mining policy should proceed without recognising past influences on mineral laws beginning with colonisation and how these have evolved through transitioning patterns of international influence (Watkins *et al.*, 2006; Bridge, 2004; Ballard and Banks, 2003; Tsing, 2005). Historical records indicate that it was not until 1899 that a mining statute was established as Indonesia's legal foundation for mining exploration and exploitation. The basic mining laws then were the 1899 Indische Mijnwet, which was modified in 1910 and 1918, and the Mijnnordonantie (Mining Ordinance) of 1906. These laws provided the central government with rights to administer all mining licences for oil, metal, coal, diamonds and other main materials. Materials which were considered 'less important' – for example, limestone, sand and clay – were given to district authorities for administration. Special mining contracts were introduced to facilitate large-scale projects; this form of contract was commonly known as a '5a contract': a provision added into the Indische Mijnwet of 1907. Among the important features of the '5a contract' were: (i) national government held the rights to conduct exploration and mineral development; and (ii) government agents could create contracts or agreements with a third party in performing exploration and mining activities, so long as the contract was not in conflict with existing regulations.

18 An attempted coup late on 30 September 1965 led to a military takeover in Indonesia by General Suharto, who replaced President Sukarno as ruler of Indonesia. In 1968, Sukarno was stripped of his title of President for Life. He remained under house arrest until his death.

by private developers appointed by the Minister of Mines and Energy. This appointment was facilitated under a contractual agreement, later named a Contract of Work for minerals (CoW), Coal Contract for coal (CC) and Production Sharing Contract for Petroleum (PSC) (Etemad and Salmasi, 2003). Significantly, however, for economic and practical reasons, the Minister was also empowered to designate certain limited deposits of strategic minerals for exploitation and authorise the development of other minerals by provincial governments, under a 'Mining Authorisation' scheme or Kuasa Pertambangan (KP) (Article 12, Law 11, 1967). The KP was a licence type that allowed only the participation of Indonesian individuals or wholly owned Indonesian companies; domestic investors were also accommodated through provisions known as 'People's Mining' permits (Aspinall, 2001).¹⁹ Hence, the 'indigenous mining sector' became recognised – on paper – as a distinct, legitimate basis for community development insofar as the new code established the principle that local people could register to participate directly in mineral extraction activities.

Decades of debate over how to update the Mining Law have seen many arguments surface, primarily through pressures exerted by foreign mining companies²⁰ and NGOs.²¹ One of the less commonly publicised arguments for reform is that 'indigenous people are not recognised *constitutionally* as having any legal rights to mineral deposits' (Watkins *et al.*, 2006, p. 5, my emphasis), which weakens the relevance of the KP policies for small-scale mining.²² Despite diverse arguments about updating the mineral code, however, Law No. 11 of 1967 provided the core legal and technical framework for mineral development for over four decades. The 1967 law classified minerals into three groups: Group A – 'Strategic Minerals' (including oil, coal and tin, among others); Group B – 'Vital Minerals'

19 Article 11 suggests that the purpose of 'People's Mining' is to provide regional governments and local communities with the opportunity to exploit minerals for the greatest benefit of the state based on guidance from the central government. Under the Mining Law, KPs can only be granted to Indonesian individuals and legal entities. Watkins *et al.* (2006) note, however, that 'although the Mining Law contemplates that the KP holder has a demonstrable capacity to exploit minerals in its KP area, this is often not the case. As a result, KP holders on occasion enter into agreements with foreign mining companies to carry out mining activities on their behalf.' Some KPs contain conditions requiring approval of such agreements (sometimes referred to as 'cooperation agreements') by the issuing authority. Government Regulation No. 75 of 2001 authorises Kabupaten [regencies] to issue KP permits, and a KP can be terminated based on three grounds: (i) expiration of its term, (ii) cancellation due to failure to comply with government regulations and requirements and (iii) uneconomic reasons. After completion of the mining for minerals in a certain mine, the holder of the relevant mining authorisation is obliged to restore the land to such a condition so as not to create any danger of disease or any other danger to the people living in the environment of the mine. The law also provides penalties for people who illegally conduct mining operations.

20 Mining companies often stress that the Indonesian government has created uncertainty for investment by threatening to impose higher royalty rates. However, it should also be noted that foreign mining investments rose considerably in the years leading to 2008. Mining investment rose to US\$1.6 billion in 2008, up from US\$1.2 billion in 2007. More importantly, with increases in mineral prices, profit margins rose at a much faster rate than investment between 2003 and 2007 (PricewaterhouseCoopers, 2007).

21 Ballard and Banks (2003) provide a lengthier discussion of the discourses of NGOs that advocate fairer corporate governance in mining, such as JATAM in Indonesia and MiningWatch in Canada.

22 There is a difference, as some interviewees from Jakarta NGOs told me, between policies to promote KPs and constitutional provisions for People's Mining. Constitutional provisions, they argue, would give more weight to policies and regulatory measures, even if there were no new substantive changes to the governance approach. However, as there is no such constitutional protection for people's mining, and as the Constitution of Indonesia still vests mineral ownership at the central government level, with mineral wealth to 'be controlled and utilised by the State for maximum prosperity of the people' (see discussion of constitutional provisions by Gandataruna and Haymon, 2011), the national state holds the ultimate power in decision-making about mineral ownership and mining, and any discussion on the benefits of constitutional reforms would be hypothetical at this time.

(including iron, copper, lead, gold and silver); and Group C – minerals not included in either Group A or B (including limestone, sand and gravel). This classification was altered slightly by Government Regulation (PP) No. 27 of 1980, which stipulates that development of strategic and vital minerals is controlled by the state while provincial governments are in charge of managing Group C minerals. Particularly for vital and strategic minerals, authority was vested in the Minister of Mines and Energy, who may assign foreign contractors to conduct developments under CoW agreements (Etemad and Salmasi, 2003). However, following the Autonomy Legislation passed in 1999, dramatic hopes for the democratisation and strengthening of local district-level environmental governance began to permeate the country – with various new implications for different sectors (Casson and Obidzinski, 2002; McCarthy, 2004; Palmer and Engel, 2007). Decentralisation was widely viewed as an attempt to ‘bring government programs closer to the local level, where presumably they are to be tailored according to local needs and conditions’ (Li, 2002, p. 275) and this shift started to affect the mining sector in new ways. A key change emerged in the form of Government Regulation No. 75 of 2000, which authorised the regional government – at the regency level (Kabupaten) – to issue ‘KP’ (local indigenous permits) for all minerals (Group A included). These developments, as examined below, shaped contemporary challenges, setting the stage for major ongoing disagreements over mining and the role of decentralisation as a coherent, pro-poor and pro-environment development strategy.

5.3. Governing minerals in the ‘decentralisation’ era: Rescaling governance, rights and controversy

Despite the Autonomy Legislation of 1999 and widespread support for decentralisation policies in the early 2000s, various government institutions disagreed in the years thereafter when discussing whether national or local authorities can administer mining rights in particular regions and with regard to issuing permits for particular minerals. As Forbes noted, this institutional tug-of-war over resources created problems as the mining industry in Indonesia has been ‘burdened by overlapping claims’ with ‘overlaps of power between the central, regional and local governments’ (Forbes, 2007, p. 1). Local government officers whom I interviewed argued that KP licences for minerals could be issued independently by Kabupaten without approval from the central government; this was often disputed by the central government agents whom I interviewed, who suggested that local governments were prone to a lack of responsible control while letting mining licences overlap. Some central government officers suggested that local authorities failed to protect the property of companies from people who ‘invaded’ the land – an issue that the national government had previously addressed through the use of police squads, as examined further below. Various stakeholders suggested that unless decentralisation processes are clarified, national authorities will never truly relinquish power over mining to lower levels of government. These concerns extend earlier warnings by researchers who cautioned that the spirit of the Autonomy Laws was being selectively resisted in the mining sector; Thorburn (2002) articulated this sentiment: ‘while many decisions that directly affect local people’s access to and use of local forest, land, coastal and marine resources have been delegated to the districts, the Ministries of Forestry and Mining have managed to retain a greater measure of centralised control over their respective realms than most other ministries’ (p. 621). Sumule (2002) nonetheless drew a cautiously optimistic outlook on early opportunities of decentralisation under the Autonomy Laws and empowerment of indigenous people in the mining sector, exploring evolving possibilities through judicial and customary institutions. Contextual knowledge in Indonesia’s mining sector, at the same time, has led to the concern that foreign companies own such large proportions of mineral rights in key geologically rich areas that local governments are prevented from being able to consider the possibility of giving

greater attention to indigenous land claims or redistributing resource ownership (Wulandari, 2008).²³

Studies of bribery and cronyism in the post-decentralisation era have also illustrated how local governments have failed to do their part responsibly in managing mineral resources (Smith *et al.*, 2003). Tsing (2005) noted that 'the decentralization of natural resource permits in 2000 spread the possibilities for corruption' linking political confusion with a widespread concern about illegality in Central Kalimantan, decrying that 'illegal resource extraction rocketed out of control' (p. 17). Her work emphasised how the illegality of mining labour serves multiple exploitative purposes for large corporations too, as illegal mineral-seekers 'lead company prospectors to the best spots' and then, later on, 'the companies displace them...and complain about the illegals, blaming them for environmental problems, thus protecting their own reputation' (p. 67). Manus (2005) added to such concerns by lamenting that the idea of 'indigenous mining rights' remained an illusion, flatly declaring that 'indigenous mining rights are not recognized by the Indonesian authorities who favour large-scale commercial exploitation over small-scale mining' (p. 2).

Interpretations of macroeconomic and political debate about foreign investment provide key overarching lenses through which to view the contentious governance pressures in Indonesia's mining sector. In particular, the heavily publicised 'Bre-X scandal' cast an ominous public relations cloud over the multinational mining industry in Indonesia. Critical development scholars have widely recognised that, in the case of Bre-X, a Canadian-based multinational company, company officials deliberately misled global investors about business prospects and local resource viability in Kalimantan. The ensuing scandal involved a web of corruption that shook confidence in the mining industry from Indonesia to Canada and countries far beyond; the shock waves served, intellectually speaking, as an occasion for redefining the 'economy of appearances' in a far-reaching global mining culture that allowed wealth accumulation to intensify based merely on the 'illusion of success' (Tsing, 2005). Recent pollution- and corruption-related scandals surrounding Newmont and other companies in Indonesia have become high profile as well (Shaw and Welford, 2007), and the Government of Indonesia has been under pressure to improve the international image of the mining industry. 'Repairing the image' of the industry, however, has been pursued with controversial approaches, producing particularly questionable benefits for marginalised groups in rural areas. The national government's use of police has repeatedly been represented as a show of support for foreign companies in order to entice investment; indeed the Indonesian Embassy Office in Canada was unambiguously advertising its fervent support for Canadian commercial interests when its website declared that it was policing local illegal miners to protect company lands, with a headline that ran 'Police Prioritize Eradication of Illegal Mining' (Embassy of Indonesia, 2007). Numerous instances of police and military crackdowns against indigenous communities have been documented, displacing dozens, hundreds and even thousands of people at a time and involving human rights violations that have been vigorously protested (Downing, 2002; Downing *et al.*, 2002; Soares, 2004).

23 In terms of land use area, mining occupies the largest land area of any industry in Indonesia. Data from JATAM (the Indonesian Mining Advocacy Network) shows that by the end of 2001, the government had issued 3,246 mining permits, consisting of 893 mining permits covering 32,765,833 hectares, 105 contracts of work covering 25,715,557 hectares, 110 coal contracts covering 8,410,106 hectares and 2,138 local mining permits issued by local governments. For more detail, see: <http://www.foei.org/en/publications/link/101/e1011415.html> (accessed June 20, 2012).

The case of Central Kalimantan examined in this research did not involve police crackdowns related to the protection of the private property of large-scale gold-mining companies. Rather, police crackdowns began to intensify in 2009 when police came into areas that were beginning to be prioritised for environmental restoration, collecting bribes. In Galangan, Central Kalimantan, an area where UN-supported capacity-building programmes had attempted to assist a local NGO to promote the introduction of cleaner ASM practices (Sulaiman *et al.*, 2007), the Katingan District found itself with less power two years after the UN project finished. District government policies to license and regulate miners, which were introduced in 2005 and 2007, did not turn into new licences being issued for small-scale gold miners in Galangan; however, when national moratoriums on licences imposed in 2009 meant that districts no longer had the power to issue licences,²⁴ in essence a new climate for recentralised decision-making had arrived. The central government's environmental authorities, in particular, had accused the district governments in Central Kalimantan of being reckless with licences since the 1999 Autonomy Laws, and a variety of environmental as well as economic rationales appeared to be involved in the central government's initiation of a moratorium on extraction licences. Following are three examples of the highly contentious implications of the police crackdowns that began to occur increasingly in Galangan in 2009, ostensibly to stop illegal activity.

1. **Renewed focus on national models for ecological modernisation and protection as barriers to livelihood formalisation:** As in the case of Zimbabwe, Indonesia's mining sector reveals a bias towards bureaucratic EIA requirements that all miners – whether artisanal, small-scale or large-scale – have to complete. One interviewee, a small-scale miner in his late forties, submitted a licence application in 2008 but now expects not to see the application processed for years, if at all. He cited the inability to secure a legal business as a cause of immense stress and anxiety and noted that this document has to go through national ministries and local district authorities' review processes, which he believes could take years. The more significant environmental barrier to formalising livelihoods in the small-scale mining sector, however, is the issue of national spatial planning in forest areas. A growing body of research has been addressing how Central Kalimantan has become one of the top priorities – if not the single top priority – of the central government and global donors in combating deforestation in Indonesia (McGregor, 2010).²⁵ The resource regulation complexities discussed above with regard to Galangan have been reshaped, and in some sense transformed, by recent reform politics relating to licence moratoriums and anti-deforestation campaigns. One interviewee pointed out that the global anti-deforestation scheme known as 'REDD' (Reducing Emissions from Deforestation and Forest Degradation) generates economic incentives for central government planners to establish and enforce environmentally protected areas, even if such areas are sites of rural livelihood activity, as also critically discussed in other provinces by McGregor (2010). Government interviewees suggested that the area encompassing Galangan will be subject to this national scheme, but specifics depend on the outcome of the government's ongoing national 'mapping' project, which will identify spaces for ecological protection. Based on interviews with senior government staff, there do not seem to be indications that any national government agency has initiated assessments to designate specific areas for ASM as part of this mapping project. The notion of legalising 'People's Mining' is apparently far from a government priority. 'We don't know what legalisation would look like...even if we could do it,' remarked one Katingan District Government representative, while contemplating the fate of Galangan (interview, July 2010, Kereng Pangli).

²⁴ Interview with district government official, July 2010.

²⁵ See also <http://www.redd-monitor.org/2011/06/23/kalimantan-forests-and-climate-partnership-faces-yet-more-criticism/> (last accessed 2 June 2012)

2. **Unevenness in miners' level of resilience amid police crackdowns:** A second significant impact of the crackdown was the uneven financial impact of the policing on mining-dependent villages. In Galangan, one interviewee was an unlicensed miner in his late twenties whom I met as he came to the gold shop to sell his week's gold production. He and the gold shop owner both confirmed that 50% of the gold shops in the area had closed in the past year because of the increased policing, which had significant ramifications for the economic life of the town (Kereng Pangi). The owner of the gold shop noted that his shop's gold stock had decreased by 25% in recent weeks. The shop owner mentioned that he typically buys from only 40 gold sellers per day, rather than the previous norm of 60 persons per day. The miner who was interviewed was not worried, however, because he was far more mobile than many other miners, as he and his co-workers travel to different gold deposits regularly and are very familiar with ways of paying the police. The miner and his four co-workers had earned 24.5 grams of gold during the week of our interview. (This was in contrast to another interviewee, a woman in her forties who had two sons in Galangan and depended on gold-mining activities for income, but said that she was not able to pay police bribes.)
3. **The implications of policing in particular locales for surrounding areas:** A third major impact of the crackdown was the increased concern about the environmental impacts that policing in particular areas could have on other surrounding areas. While mining in Galangan has had significant impacts on the depletion of the forest and its moonscape-like landscape covers nearly 200 square kilometres, the outward expansion of mining into forest areas has slowed substantially in recent years (Telmer and Stapper, 2007). Some interviewees argued that the continued mining of this area – especially given that this area's forest is already clear-cut – poses considerably less of an ecosystem threat than other types of gold-mining in rivers nearby, where ongoing dredging erodes and contaminates the river. Dredging creates diesel pollution and mercury contamination of waters used by community members and severe sedimentation that has had negative impacts on fish supplies; numerous interviewees made these points to contrast dredging to land-based mining in Galangan. One miner took me on a boat trip to see the dredging up close in the Kahayan River – which is far less policed and less accessible than the land-based mining in Galangan. Some estimates suggest that some 3,000 to 6,000 dredges have been made in the Kahayan River.²⁶ The policing activities in Galangan have, according to some miners, forced miners to do more dredging and the impacts of livelihood transitions have yet to be fully researched.

26 Arguably, the river mining with these dredges causes far more environmental destruction than land-based mining, because of the erosion of river sediment, the oil that goes directly in the water from the dredges, and other factors. My purpose is not to demonise river miners; rather, it is to share the perspective here that certain categories of ASM may have much more significant ecological impacts than others, and that policing land-based mining in Galangan may have unintended consequences by driving people into river mining.

6. Synthesis of comparative analysis and future directions for research and policy

6.1. Formalisation revisited: Scales of contestation

A key insight during the study, which shaped this study's approach in developing a comparative analysis, was that local district governments in each of the case studies had been explicitly undermined by central government authorities with respect to managing mining activity in a coherent fashion. Miners and other local community members also felt that local governments have failed them and, in some ways, that global institutions have failed them too. A series of scales of geographical interrelation can be traced (e.g. national to district, district to local, international to national, and many others); this study traced just some of these relational scales, highlighting the relevance of centralisation and decentralisation in formalisation debates. I do not suggest that there is a constant one-way 'cascade' of power flowing through these relational scales; I suggest instead that they are open to multiple configurations of power structures and changing pressures over time.

Ultimately, the approach in the analysis focused more on problems that arise in examining the centralising of power and less on the problems that may arise from decentralising decision-making power in governing mining. This is for a particular reason: central government agencies both in Indonesia and in Zimbabwe took steps to explicitly recentralise decision-making power in the mining sector during the study period (2005–2010). In some sense, the focus on 'recentralising power' at a national scale thus speaks to the historical particularities of this study. Nonetheless, while focusing on contemporary experiences of 'recentralisation', an opportunity arises to reconceptualise the extent to which national and regional scales of decision-making interact, how recentralisation dynamics can be contextualised within a wider historical understanding of mineral governance regimes, which differ in Zimbabwe and Indonesia, and also how global institutions relate to contested scales of decision-making power. In examining the recent 'recentralisation' dynamics, the study has also suggested that rural mining groups do make efforts to 're-decentralise' power by taking power into their own hands. Further work is needed to sketch out strategies of resilience on the ground while rethinking the implications of multi-scaled regulation dynamics. Table 2 illustrates a variety of points of comparison to highlight factors affecting formalisation barriers for small-scale producers in the mining sector.

Table 2 indicates that revenue from mining is distributed in different ways in Zimbabwe and Indonesia. While local district governments in Indonesia have a higher degree of institutional capacity and empowerment from revenues, Rural District Councils in Zimbabwe have significantly lost powers and capacities in the past decade. A variety of other factors can be used as points of comparison, e.g. in Zimbabwe, tribute policies exist to negotiate contested space between large and small-scale miners, whereas no tribute policies exist in Indonesia. The different technical specifications for licences also provide a notable contrast, and the barriers to ASM 'formalisation' can be seen in this table as emanating from a convergence of multiple factors – factors that have changed considerably over time.

Table 2. Comparison of Case Studies: Factors Affecting Formalisation Barriers

Case Study Point of Comparison	Zimbabwe Gold-Mining Case Study	Indonesia Gold-Mining Case Study
% of area covered by large or medium-scale companies' mining/exploration licences	95% of Great Dyke area covered (source: Zimbabwe Miners Federation, 2007)	Most of Galangan under zircon company concession (but no gold-mining licences issued)
Key policies for mining	1996 Mines and Minerals Act; 1991 Mining (Alluvial Gold) (Public Streams) Regulations; Indigenisation and Economic Empowerment (General) Regulations SI 21 of 2010	Mining Law 11 of 1967; Autonomy Legislation of 1999; Katingan District Regulation No. 3 (2006); 2009 Mining Law
National policies shaping small-scale miners' relation to larger mining companies	Tribute policies exist to facilitate concession sharing between ASMs and large-scale companies	No tribute policies exist
Spatial dimensions of small-scale mining laws	Minimum for pegging is 100 hectares	A people's mining permit granted to an individual may cover a maximum area of 5 (five) hectares; a cooperative may be provided with a people's mining permit covering a maximum area of 25 (twenty-five) hectares
Policies to decentralise mineral revenues (of relevance to empowering district governance institutions in mineral governance)	Rural District Councils receive less than 0.001% of official revenue	Local government and provinces receive 39% official revenue allocations from mining company tax revenues; the remaining 61% goes to the central government (source: PricewaterhouseCoopers, 2006)
Formal powers of local government institutions in licensing (changes during 2005–2010)	Main powers terminated by central government in all districts	Main powers terminated by central government in the case of Katingan District
Value of commodity in case study context	Value of geological deposits are high in Insiza District and Kadoma-Chakari area	Value of geological deposits are unknown/not high in the Galangan region of Central Kalimantan
Major 'environmental policy' barrier to formalisation	Environmental Impact Assessment (EIA) fees (fees for mandatory consultancy reports and government processing)	National forestry mapping (especially for REDD) and moratoriums on licences; secondarily, bans on mercury use and EIAs
Cost of fees for EIA approval	>4,000 US dollars	>3,000 US dollars
Formal associations in ASM case study context	Multiple formally registered (national and regional) ASM associations exist	No formally registered associations exist

6.2. Towards research-informed governance models: Engaging the livelihood concerns of small-scale producers?

This paper has examined why scalar-sensitive research across sectors is needed to inform ways of developing sound frameworks for rural resource governance. It has documented some of the recent effects of 'formalisation' paradigms, and while many sectors reveal contentious governance dynamics, the mining sector is an example of a sector where impacts on small-scale producers in recent years suggest that central government formalisation policies are leading to growing threats to livelihood security. Because mineral rights often take precedence over traditional land rights in developing countries (Hilson, 2008), the implications of this should be understood carefully, as

different kinds of actors (not just ‘miners’ generally) may be rewarded and/or disadvantaged as a consequence, raising further complexities that trouble the ‘win-win’ narrative of formalisation. A government policy framework’s bias in favour of mining might seem to give ‘miners’ strong opportunity for formalising their operations. To give one contextual illustration, past reports in Zimbabwe might at first seem to indicate that this is the case, given that mining legislation in Zimbabwe has allowed miners to peg claims on farmers’ land even without obtaining permission from the farmer first. As David Love – one of Zimbabwe’s leading environmental law experts – notes, the miner is merely required to inform the farmer and acquire the necessary licences and permission from the Ministry of Mines and Mining Development (Love, 2005).²⁷ Despite this legal bias in favour of mining, which Love identifies as a legacy of colonial law, this arrangement has not necessarily benefited poorer small-scale mining workers. Mining communities are far from homogeneous, and although policies have been designed with the intent of standardising approaches for legitimate extraction, this standardisation has led to new problems. Zimbabwe and Indonesia are both examples where, although prospective operators are required to undertake a series of drawn-out bureaucratic tasks in order to secure a parcel of resource rights through legal channels, informal-sector workers may or may not have the political connections necessary for acquiring these rights, the capacity or the knowledge of how to make the legalisation process work. Where a ‘scalar’ critique can assist this discussion is by considering how the technocratic design and implementation of national regulation regimes might serve various political interests that defy simple linear conceptual models of regulation, that might be shaped by diverse actors at different geographical scales, and that might be subverted in complex ways too, rendering, in turn, complexities for imagining the possibility for resisting regimes of indiscriminate rural criminalisation.

Decriminalising livelihoods in conditions of economic hardship is a necessary step towards more sustainable resource management, but decriminalisation requires paying careful attention to the nuances and regional differences in how small-scale producers work. This is particularly needed in situations of potentially high-risk activity such as in small-scale mining contexts, where a range of socio-environmental complexities need to be addressed with context-sensitive approaches that extend considerably the ‘modernisation’ models that have largely embraced the image of the corporate mining company as the legitimate model of resource exploitation. EIA models, for instance, cannot be effective when they require small-scale producers to act and pay as if they were large-scale companies (i.e. requiring small-scale miners to pay more than 4,000 US dollars for the EIA). In both Indonesia and Zimbabwe, EIA models have yet to be adapted to the socio-economic capacities and realities of small-scale producers in the gold-mining sector. UN agencies have launched an effort to promote more sensitive regulations, for instance, in the form of regulatory frameworks that can help to decriminalise the use of mercury in low-income mining communities that depend on rudimentary gold-mining extraction practices. UNIDO and the UN Environment

27 Love (2005) examines how historically, as a relic of colonial policy that has persisted in the post-colonial era, an ‘overwhelming bias to mining in Zimbabwe’s legislation’ (p. 46) has meant that ‘mining law overrides much of other natural resource management law, including water, environment and land’ (p. 46). Love’s (2005) discussion of biases towards the mining sector in Zimbabwean law can be compared with Gandataruna and Haymon’s (2011) discussion of biases towards mining in Indonesia’s legal framework. While the Indonesian legal framework is not as explicitly biased in favour of mining, as the law notes that some degree of ‘approval of land title holders’ is required before licensed mining companies can begin operations, Gandataruna and Haymon (2011) note that ambiguities and weaknesses in the law effectively mean that the legal framework ‘implies that land title holders have no right to refuse access to mining license holders’ (p. 226). Thus, both Zimbabwe and Indonesia provide examples where national legal frameworks on paper appear to prioritise mining above other sectors, even if small-scale mining communities have not necessarily benefited from the laws.

Programme have proposed International Guidelines on Mercury Management in Small-Scale Gold Mining (see Spiegel and Veiga, 2010), but at present, many governments continue to adhere to environmental and rural planning models that conform to the models of larger-scale operations, not small-scale production, and the practices of rudimentary ASM are still generally not recognised in national legislation or policy. Furthermore, as global initiatives such as REDD are being accompanied by central government efforts to impose moratoriums and block local districts from licensing mining (e.g. as in Katingan District, Indonesia), it remains to be seen whether low-income small-scale producers will be able to find effective means of negotiating 'formal legitimacy' when licensing options do not seem to be available. Large-scale mining companies have managed to receive exemption from some of the national environmental planning schemes and moratoriums, but, as small-scale producers tend to have less negotiating power with national governance agents and international institutions, it remains to be seen whether global institutions will invest in new approaches to respond to complex livelihood situations (such as those in gold-mining areas).

To conclude, detailed research is also evidently needed on the interlinkage between rural resource sectors; it is recognised that the introduction of heavy-handed law enforcement campaigns to stop unlicensed livelihood practices in one sector is like to have effects on other sectors too. This study encountered cases in Indonesia where illegal loggers, when policed, became gold miners and where illegal land-based gold miners, when policed, began to depend on river dredging (a more ecologically severe form of gold-mining); it also encountered cases in Zimbabwe where illegal riverbed gold panners, when policed, became primary ore gold miners, and vice versa. Law enforcement campaigns as conceptualised by far-away central government planners rarely seem to work out in the manner planned. Embracing a vision of 'ordered, gridlike spaces' (Ferguson, 2007, p. 72) for resource management becomes a dangerous analytic trend when governments decide to centralise power over rural resource governance. If long-lasting solutions for sustainable and equitable resource governance are to be found, and if informal economies are to be engaged more fruitfully, more research-informed policy development processes need to be attuned to the heterogeneity in livelihood practices, the risks in central planners' standardised visions of rural order and resource governance and the contextual possibilities for governance alternatives.

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This research was carried out by CIFOR as part of the CGIAR Research Programme, 'Forests, Trees and Agroforestry: Livelihoods, Landscapes and Governance'. The Programme aims to enhance management and use of forests, agroforestry and tree genetic resources across the landscape from forests to farms. CIFOR leads the collaborative Programme in partnership with Bioversity International, the International Center for Tropical Agriculture and the World Agroforestry Centre.

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